AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A loudspeaker system having a line array of drivers comprising:

a first pair of drivers configured to receive a signal from a sound source;

a center point along the line array, wherein the first pair of drivers are substantially centered about the center point with a center to center distance of d_0 between the first pair of drivers, and wherein the first pair of drivers receive a signal comprising a first frequency band;

at least a subsequent pair of drivers arranged in the line array with the first pair of drivers and substantially centered about the center point, wherein the subsequent pair of drivers are spaced such that the center to center distance between each at least a subsequent pair of drivers, d_n, is equal to $4nd_0$, where $n = 0$ at the ~~innermost~~ first pair of drivers and n increases by 1 for each at least a subsequent pair of drivers, wherein the at least a subsequent pair of drivers receive a signal comprising a second frequency band; and

wherein the first frequency band and the second frequency band comprise a common frequency band at a common level of attenuation.

2. (Original) The loudspeaker system of claim 1, further comprising a low pass filter on every pair of drivers for $n > 0$.

3. (Previously Presented) The loudspeaker system of claim 2, wherein $n>1$ and the low pass filter has a different corner frequency for each pair of drivers.

4. (Original) The loudspeaker system of claim 2, wherein each low pass filter is of first order.

5. (Previously Presented) The loudspeaker system of claim 3, wherein the corner frequency, f_n, of the low pass filter of each pair of drivers is equal to $2c/d_n$, where c is the speed of sound.

6. (Previously Presented) The loudspeaker system of claim 3, wherein the low pass filter on the outermost pair of drivers in the array has a corner frequency calculated by $f_n = c/d_n$.

7. (Original) The loudspeaker system of claim 1, further comprising a driver centered on the center point of the line array.

8. (Previously Presented) A transducer spacing arrangement in an array, the arrangement comprising:

a first pair of transducers having a first distance, d_0, between the center points of the transducers in the first pair of transducers, wherein the transducers are configured to receive a signal from a sound source;

a second pair of transducers arranged in the array with the first pair of transducers and having a second distance, d_1, between the center points of the transducers in the second pair of transducers, wherein the midpoint of d_0 is the same midpoint of d_1, and wherein the second distance, d_1, is equal to $4d_0$;

a low pass filter of first order on the second pair of transducers, wherein the first pair of transducers receives a signal comprising a first frequency band and the second pair of transducers receives a signal comprising a second frequency band; and

wherein the first frequency band and the second frequency band comprise a common frequency band at a common level of attenuation.

9. (Canceled)

10. (Currently Amended) The transducer spacing arrangement of claim 8 , wherein d_0 is 1.2 inches, and d_1 is 4.8 inches~~, and d_2 is 9.6 inches~~.

11. (Original) The transducer spacing arrangement of claim 8, further comprising a transducer at the center point of d_0.

12. (Currently Amended) The transducer spacing arrangement of claim 8, further comprising at least a third pair of transducers, and a low pass filter of first order on the at least a third pair of transducers.

13. (Original) The transducer spacing arrangement of claim 12, wherein the outermost pair of transducers in the array has the lowest frequency low pass filter.

14. (Previously Presented) A method for optimizing a radiation pattern of drivers in a line on a loudspeaker, the method comprising the steps of:

selecting a spacing, d_0, between the centers of a pair of innermost drivers according to the formula $d_0 = c/2f$ wherein c is the speed of sound and f is the maximum desired operational frequency and wherein the pair of innermost drivers receive a signal comprising a frequency band z_0;

selecting a center point in the line, wherein the center point is the same position on the line as $d_0/2$; and

determining the spacing of at least one additional pairs of drivers in the line wherein each driver of the additional pair of drivers is added to the outermost positions of the line, wherein the distance, d_n, between the centers of the additional drivers is according to the formula $d_n = 4nd_0$ where $n = 0$ at the innermost pair of drivers and n increases by 1 with each pair of drivers sequentially added along the array, and wherein the at least one additional pair of drivers receive a signal comprising a frequency band z_n;

wherein each of the frequency bands z_0 through z_n comprise a common frequency band at a common level of attenuation.

15. (Original) The method of claim 14, wherein the pairs of drivers are used in conjunction with low pass filtering.

16. (Original) The method of claim 15, wherein the low pass filtering is of the first order.

17. (Previously Presented) The method of claim 15, wherein the corner frequency, f_n, of the low pass filters for each pair of drivers is calculated according to the equation $f_n = 2c/d_n$.

18. (Previously Presented) The method of claim 15, wherein the low pass filter for the outermost pair of drivers has a corner frequency calculated by the equation of $f_n = c/d_n$.

19. (Original) The method of claim 14, wherein the maximum desired operational frequency is substantially the highest frequency without high amplitude side lobes.